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SERVICES WITHIN THE MANDATE OF UNCTAD

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Studies on sectors of priority interest to developing countries: Issues relating to the export of labour-intensive services

Report by the UNCTAD secretariat

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SUMMARY AND CONCLUSIONS

(i) Many developing countries are able to supply a wide range of labour-intensive services, including highly skilled professional services at a competitive price. The draft General Agreement on Trade in Services negotiated in the Uruguay Round, and the progressive liberalization negotiated within its framework in the same Round, will result in meaningful possibilities for the increased participation of developing countries in trade in services to the extent to that it permits them to capitalize effectively upon their labour-cost advantage. Greater participation of developing countries in world trade in services will not only provide a stimulus to their economic growth and development, but will also lead to a more rational and efficient international division of labour in trade in services.

(ii) The major trade barrier in this respect would seem to be immigration regulations, which impede the temporary movement of service providers from developing countries. While flows of such providers are already significant, the negotiation of precise access commitments for specified categories of "natural persons" at the sectoral and subsectoral levels in sectors of interest to developing countries is necessary to provide them with improved access, secure from the vagaries of immigration policies. The draft General Agreement on Trade in Services recognizes the movement of persons to supply services as constituting "trade in services". The Annex on "Movement of natural persons providing services under the Agreement" provides a framework for the negotiation of such concessions.

(iii) Professional qualifications and licensing requirements can also impede developing countries' exports of labour-intensive services. The draft General Agreement on Trade in Services lays down certain rules and principles to prevent such regulations from being used for protectionist purposes or as a means of discrimination among countries, and to indicate the possibilities of negotiating specific concessions in this respect. However, developing countries need much more information on such qualifications, and on an effective mechanism for acquiring information, if they are to make good use of these provisions.

(iv) For developing countries to benefit effectively from market access opportunities, they need to formulate appropriate policies at the national level. In the context of the movement of labour, the creation of more structured mechanisms, including incentives to the organization of labour services on an enterprise basis, would seem to be desirable in order to facilitate strategies for building up competitiveness through the accumulation of expertise and technology. Given the exceptional importance of labour movement in Africa, the export of labour-intensive services offers a significant potential that should be exploited.

(v) Tradeability of services has increased substantially as a result of advancements in telecommunications and information technologies, and data resources have meanwhile become a major component of many services owing to their information-intensive nature. The scale of activity in offshore office services has grown considerably in the last few years, and these services are likely to remain as a market niche for developing countries, although they will have to be continually upgraded to avoid obsolescence. At the same time, inadequate infrastructure, lack of trained personnel and inappropriate regulatory policies are frequently identified as the major obstacles preventing the developing countries from establishing viable information-based service industries, and hence developing an export capacity.

(vi) A variety of policy measures have been used to create a local environment for the export of labour-intensive services through information networks, improved infrastructure, training of technical personnel, regulatory policies, investment plans and overall industrial strategy for the building of telecommunications and data services (TDS). Experience in developed and developing countries shows there is no single model. However, inasmuch as countries are becoming competitors for TDS centres, investment and resources, differences lie more in the details of national actions rather than objectives or goals.

(vii) In its future work directed toward the increased participation of developing countries in trade in services, UNCTAD should:

(1) identify existing barriers to the temporary movement of services suppliers at sectoral and sub-sectoral levels;
(2) assess the results of the Uruguay Round negotiations on trade in services in relation to concessions on movement of personnel;
(3) identify anti-competitive business practices that restrict the export of labour-intensive services;
(4) assist developing countries to formulate service export strategies that capitalize on the possibilities of exporting labour-intensive services derived from the draft General Agreement on Trade in Services;
(5) study the possibilities of increasing labour-intensive services from developing countries through telecommunications and information facilities;
(6) provide technical assistance to developing countries at national, subregional and regional levels for the above-mentioned areas;
(7) identify possibilities for regional and interregional cooperation among developing countries to promote their export of labour-intensive services.

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INTRODUCTION

1. Pursuant to paragraph 105 of the Final Act of UNCTAD VII, recent secretariat work on services has focused on the implications of the issues raised in the context of trade in services, and on the preparation of specific studies on sectors of priority interest to developing countries, particularly with a view to building and improving infrastructures and capabilities with the objective of developing efficient and competitive industries in strengthening their export potential. The analytical report on services submitted to the eighth session of UNCTAD consolidated previous work (TD/358), identifying problems in specific service sectors and considering possible approaches at the national and international level to deal with such problems.[1] UNCTAD's technical assistance programme on the Uruguay Round, which assists developing countries in the negotiation of a multilateral framework for trade in services, has been undertaking studies complementary to this exercise.[2]

2. The multilateral trading system, characterized by the bound reductions in mfn tariffs as a result of the multilateral rounds of tariff negotiations in GATT, complemented by the generalized system of preferences (GSP) and other preferential tariff schemes in favour of developing countries, has enabled an increasing number of developing countries to take advantage of their lower costs and increasing levels of skills, combined with their access to technology, to strengthen their competitive positions in trade in goods, such as textiles and clothing, electronics, etc., and thus to expand their shares of world trade. The challenge facing the negotiators in the Uruguay Round has been to devise a comparable system for trade in services that would provide developing countries with similar opportunities to increase their share of world trade in services. The perception that the dominant position of developed country enterprises derived from their ability to penetrate markets through the cross-border movement of information and capital, while any labour-cost advantage enjoyed by developing countries would remain frustrated by increasingly stringent immigration regulations, led developing countries to insist on "symmetry" with respect to the movement of factors of production, i.e. that labour and capital should be maintained within the disciplines of a multilateral framework for trade in services. The annex on "Movement of natural persons providing services under the Agreement', appended to the draft General Agreement on Trade in Services, establishes the context for the negotiation of specific commitments with respect to this mode of supply on a sectoral and subsectoral basis.

3. This report examines certain problems and opportunities facing developing countries in translating labour-cost advantages into competitive advantages in trade in services. In doing so, it focuses on two principal modes of supply of labour-intensive services: the movement of persons to supply services and services exports through cross-border information flows. The report attempts to: (i) examine the experiences of developing countries in exporting labour-intensive services through these two modes of supply; (ii) identify trade barriers to the movement of service suppliers, (iii) review technological and legislative developments relevant to cross-border information flows, and (iv) suggest policy measures to increas exports of services in developing countries through the means discussed in the report. The term "labour services" is used in this report to denote those service sectors that are labour intensive at all levels of skill, where developing countries could be expected to possess a comparative advantage. Many of these services fall into the realm of business

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1 For example, UNCTAD, Services in Asia and the Pacific: Selected Papers, (UNCTAD/ITP/51) vol. I, New York, 1990, and vol. II, New York, 1991.

2 UNCTAD, Trade and Development Report, 1988 and 1991; doc. TD/B/1241 of 10 January 1990; and UNCTAD, Trade in Services: Sectoral Issues (UNCTAD ITP/26), New York, 1989.

or producer's services, that is services consumed by producers as intermediate inputs, such as cleaning services, security services, accounting services, engineering services and software services, and their efficient provision therefore contributes to the overall competitiveness of the final product or service.[3]

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3 Other important aspects for facilitating trade in services, including labour-intensive services, i.e. commercial presence in foreign markets and consumer movements, will be discussed in the future report.

CHAPTER I

TEMPORARY MOVEMENT OF PERSONS

A. Labour exports

4. Apart from the obvious case of services incorporated in goods, developing countries have traditionally capitalized on their labour-cost advantage in the provision of services through the physical movement of persons across national frontiers. The most prevalent mechanism has been through "guest worker" type programmes largely controlled by the importing country and geared to its labour market situation. In this scenario, the labour-short importing country establishes legislation typically involving bilateral agreements, whereby "guest workers" from a labour-rich country can be hired by employers of the importing country. The two sets of programmes that have generated the largest waves of temporary guest workers have been respectively those introduced by the Western European countries during the 1950s, 1960s, and 1970s and, more recently, in the 1970s and 1980s, the programmes of the Gulf Co-operation Council (GCC) countries and several Arab oil-exporting countries. At their peak in the 1970s, guest workers in Western Europe amounted to several million, mainly from Spain, Portugal, Turkey, Yugoslavia, Tunisia, Algeria, and Morocco. One estimate places the number of non-nationals working and living in the GCC countries, for the most part on a "guest worker" basis, including many from other Arab countries as well as from Asia (India, Thailand, Pakistan, Bangladesh, the Philippines), at over seven million in 1988.[4]

5. Some labour-exporting countries have devised an alternative model in the form of the organized export of labour services, in which exporting firms identify export opportunities and devise strategies to penetrate markets by bringing the management, know-how, and personnel they need to provide their service in the importing country. In this scenario, the personnel who relocate to the importing country remain employed by a firm from the exporting country, but may also include self-employed service providers based in the exporting country or who enter into contractual employment relationships with firms in the exporting, importing or third country (e.g. sportspeople, free-lance writers or journalists, independent consultants, etc.), to carry out specific assignments.

6. While such organized exports of labour services have existed for many years (for example, ship owners have long rented the services of their vessels and crews to firms other than those of their country of origin), such exports have only begun to constitute significant trade flows more recently. The construction boom in the Gulf countries during the 1970s and 1980s gave a formidable impetus to the export of construction services by firms which not only brought the project management know-how or engineering expertise but also the construction teams (sometimes recruited from third countries) necessary to build the

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4 J.S. Birks and C.A. Sinclair, "Manpower and population evaluation in the GCC and the Libyan Arab Jamahariya", Working Paper No. 42, World Employment Programme Research (Geneva, International Labour Office, October 1989).

projects. Construction firms from the Republic of Korea, Egypt, Morocco, Lebanon, Yugoslavia, India, China[5] and other developing countries entered these new export markets during those years.[6] More recently (during the 1980s) a number of countries have adopted similar approaches for labour-intensive services incorporating new technologies. For example, India, the Republic of Korea and the Philippines, have been relatively successful in penetrating world markets for computer software and data processing services, including those of such advanced countries as the United States or Japan.[7] Firms from India and the Republic of Korea now export engineering and management consulting services throughout Asia and in the West; while Mexican firms export engineering and construction services to all parts of Latin America and now even to some areas of the United States.[7]

7. For exporting countries, several considerations militate in favour of assuming control of and organizing trade in labour services. First, such exports can be structured not only as the export of unskilled labour but also of the managerial know-how and technical expertise that goes along with the service so as to provide a system from which the value added is much higher than the mere wages and salaries earned by guest workers. In addition, the opportunities for technology transfer for exporting developing countries are enhanced in that their firms accumulate experience and expertise and obtain knowledge and techniques from working in collaboration with firms from developed countries that possess superior technologies.[9] Such advantages can be further accentuated by strategies that seek to upgrade skills and experiences through exposing personnel to increasingly challenging situations and rotating individuals so as to broaden the overall knowledge base. As a consequence, the exporting firm, and the country as a whole, can continually increase their competitiveness in the export of services and develop the ability to participate in multinational projects assembled anywhere in the world.

8. Importing countries also appear to have an interest in a more organized and structured trade in services through labour movement. Labour-short countries that have used large guest worker programmes over the years have subsequently encountered problems resulting from their difficulties in absorbing the sizeable share of temporary guest workers who stayed as permanent immigrants. More structured trade in labour services would enable the duration of stay of the temporary labour employed by the exporting firm to be linked much more closely and directly to a limited time period (for example, the duration of the project for which the labour has been brought in) and to the provision of clearly defined skills, while providing greater security of access to the exporting country and reducing the motivations for illegal immigration. Such trade in labour services would provide

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5 In 1991, nearly 100,000 Chinese were employed overseas on labour service projects managed by over 50 international economic and technical cooperation corporations set up especially by the central and regional governments since the mid-1980s for the purpose of exporting labour services. These labour service export corporations had over $3 billion worth of outstanding contracts in well over 60 countries including many in sub-Saharan Africa, the Gulf countries and the Middle East, Viet Nam, Laos, Hong Kong, Indonesia, Malaysia, Singapore and even the Russian Federation. Chief among those contracts were general construction, specialized engineering and engineering consultancy contracts financed either by the Chinese Government aid programme itself, or by international donor agencies such as the World Bank and UNDP, as well as donor agencies of the rich countries (e.g. Germany). A number of these corporations have been positioning themselves to bid on the Hong Kong $20 billion airport project, *China Trade Report*, January 1983; *China Daily*, 25 November 1991.

6 See for example, A.B. Zahlan, *Acquiring Technological Capicity: A Study of Arab Consulting and Contracting Firms* (London, McMillan, 1991).

7 In 1988-1989, India's computer software exports were estimated at well over $US100 million. Tata Consultancy Services, India's second largest software producer and the country's largest software exporter, employed over 500 software engineers and programmers overseas, primarily in the United States, and another 200 individuals building software in one of India's booming export processing zones. In 1988, over 800 Filipino software professionals were employed overseas as temporary workers. In addition, the country's software industry was steadily building an export base, primarily in the data entry and software conversion business, with its main clients in the United States, Japan, Australia and Western Europe. (Thierry Noyelle, "Computer software and computer services in five Asian countries", in UNCTAD, Services in Asia and the Pacific: Selected Papers, vol. one (UNCTAD/ITP/51), New York, 1990).

8 ICA, one of Mexico's largest construction firms, has built projects throughout Latin America (including subways in several countries) and accumulated well over $100 million worth of contracts in Florida after barely two years of presence in that state (ICA, Annual Report, 1990).

9 Software industries in some Asian countries have been successful in moving into the higher end of the industry through acquiring experiences in developed countries. See Thierry Noyelle, "Computer software and .....", *op. cit.*

more flexibility from the point of view of importing countries as the flows of labour service imports would respond much more readily to the vagaries of market demands.

B. Importance of the movement of labour

9. Labour income, migrant transfers and workers' remittances can contribute importantly to the balance of payments of countries that are large exporters of labour or labour services.[10] Table 1 shows the levels of current account revenues from labour income, migrant transfers and workers' remittances for 12 selected developing countries, as well as the relative importance of those earnings as a percentage of GDP. In GDP percentage terms, their importance is large in at least 8 of the 12 countries. In the case of Lesotho, the most extreme example of a country's dependency on its labour exports and labour services exports, revenues from labour income, migrant transfers and workers' remittances are larger than that country's GDP. The Asia and Pacific region is overwhelmingly dominated by labour-intensive service exporting countries, with eight Asian countries recording a net migrant outflow of more than 100,000 during 1985-1990.

10. Statistics on trade in labour services are difficult to compare internationally as most countries do not systematically desaggregate data at the levels of important traded sectors such as construction, business services, etc. Furthermore, the classification of payments related with service activities in balance-of-payments statistics with respect to labour income, migrant transfers, workers' remittances and "other services" differs considerably from country to country making comparisons difficult and often misleading.[11]

11. Contemporary labour movements - be they temporary or permanent - from developing countries have traditionally given rise to concern in such countries, where they have taken the form of an exodus of trained personnel from the less-developed to more developed countries - the so-called "brain drain" or "reverse transfer of technology". Perceived as especially disconcerting has been the departure of workers with scarce skills and the export of educational resources critically important to development.[12] The organized temporary movement of persons to supply specific services (as noted above) can have the opposite effect as it implies the building up of skills on an individual basis by persons who would not permantly relocate to foreign countries. It also enables service firms to enhance their competitiveness deriving from human capital embodied in its workers and the organizational and technical know-how accumulated by the firm itself.

12. In addition, much labour movement takes place within developing regions, especially in Asia, Africa, and the Middle East. In the Middle East workers engaged in professional

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10 Pang Eng Fong and Linda Low, "Labour mobility, trade in services, and the Uruguay Round: The perspective of ASEAN countries" in Services in Asia and the Pacific: Selected Papers, vol. one (UNCTAD/ITP/51), New York, 1990, and Thierry Noyelle and Beth Redfield, "Internationally traded labour services in Africa: Issues for a general agreement on trade in services", UNCTAD (forthcoming), Spring 1991.

11 The study by Maria Dunavölgi in "Statistics on service trade in Asia", Services in Asia and the Pacific: Selected Papers (UNCTAD/ITP/51), vol. two, (United Nations publication, Sales No. E.91.II.D.7), New York, 1991, provides striking examples in this respect.

12 For example, one observer recently noted:

> It is likely, that if a less-developed country has an expanding economy, it will be handicapped by the loss of critical trained manpower, and the development process will then be deterred. On the other hand, if a less-developed country has a stagnant or deteriorating economy which cannot absorb any more trained personnel, then their transfer will contribute to the development process by relieving unemployment, and by acquiring repatriated funds that will increase foreign reserves of currency.

Bernard I. Logan, "The reverse transfer of technology from sub-Saharan Africa to the United States", *The Journal of Modern African Studies*, 25(4), pp. 597-612.

services and commerce move within the region.[13] Studies by United Nations demographers and others show that, in the case of Africa, most trained Africans tend to migrate to other African countries and, similarly, that a significant portion of the vacancies for trained personnel in importing African countries are filled by foreign African professionals. [14]

13. The competitive advantage of developing countries in trade in labour services is not simply the result of lower costs for unskilled labour but also of the growing capacity of a number of them to provide skilled and highly skilled labour to export markets. For example, nearly half of the two million Egyptians working overseas - most of them on a temporary basis - have complete high school education as a minimum and nearly a quarter of those two million have a college-level education, and many of them hold technical, professional, or managerial occupations in, for instance, medical and educational services.[15] Likewise, nearly one-quarter of the 480,000 Filipinos working overseas in 1987 were employed in professional, technical, and managerial occupations.

C. The export of labour-intensive services: a significant potential for Africa

14. While economic growth and development in most African countries are hampered by structural constraints, export of labour-intensive services would seem to offer an obvious and attractive economic development opportunity.

15. According to a recent study,[16] the last two decades have witnessed growing intra- and inter-continental migration in Africa. Consequently, income flows resulting from the export of labour flows when compared to both the balance of invisibles and the GDP of a large number of African countries have become significant (e.g., Egypt, Morocco, Tunisia, Benin, Burkina Faso, Côte d'Ivoire, Liberia, Central African Republic, Congo, Gabon, Senegal, United Republic of Tanzania, Botswana, Mozambique, the Republic of South Africa, Somalia, Sudan and Lesotho). As the same study states, "if there is one continent in the world where economies are dependent on their export of personnel for income, it must be Africa".[17]

16. There is a growing realization among most African countries that the export of labour-intensive services holds a significant development potential which should be exploited. Therefore action is needed to sustain the sector in the following key respects:

- efforts are needed to improve the knowledge of the flows of organized labour migration and the financial impact of labour migration on African economies;
- there is also a clear need for action to reinforce agreements on regional labour movements;
- other measures necessary include the opening of developed countries to exports of labour-intensive services from African countries. A priority area for such liberalization would appear to be not only exports of managerial, executive and high level specialized personnel but also other (or "dependent") personnel.
- finally, there is a need for special measures on the part of developed countries in favour of African economies. There, the range of option is wide, going from

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13 "Services in the developing countries", Trade and Development Report, 1988 (UNCTAD/TDR/8) (United Nations publication, Sales No. E.88.II.D.8), sect. B.3, 1988.

14 See, for example, research summarized in Noyelle and Redfield, "Internationally traded labour services in Africa ....", *op. cit.*, also Pang Eng Fong and Linda Low, *op. cit.*

15 Thierry Noyelle and Beth Redfield, "Internationally traded labour services in Africa...", *op. cit.*

16 Ibid.

17 Ibid.

preferential schemes for exports to assistance to economic reconversion for expatriate Africans returning home.

D. Temporary movement of persons into the developed countries

17. The temporary movement of persons into the developed countries has reached important levels. Annual flows of temporary foreign personnel (business visitors as well as temporary immigrants for work) and temporary foreign consumers (tourists - or visitors for pleasure - students and retired persons primarily) into the economies of several developed countries as of the late 1980s are listed in table 3. The coverage of these data varies owing to the particular features of each country's statistical apparatus. Some countries keep detailed statistics, others do not, for example, Canada does not keep an official count of visitors (either short-term business visitors or visitors for pleasure).

18. Estimates of the numbers of business visitors entering the three countries that keep precise records of this type of entry (United Kingdom, United States and, to a less detailed extent, Australia) suggest that annual inflows of business visitors are already quite high: over 2.5 million (excluding Canadians and Mexicans) into the United States in 1989, 1.3 million (excluding the EC) into the United Kingdom in 1990, and 2 million into Australia in 1987-1988. Business visitors are individuals who enter a country for the purpose of conducting business typically for a short period of time, e.g. a few days or a week or so. These numbers probably underestimate the true magnitude of business visits since many individuals simply enter as tourists (visitors for pleasure) without mentioning the real purpose of their visit.

19. Estimates of the numbers of aliens who are allowed to reside and work temporarily in developed countries also suggest that this form of movement is already quite established. Excluding those persons allowed to work and reside temporarily because of their employment by the foreign government or an international organization, there were 44,000 temporary immigrants for an anticipated stay of longer than one year in Australia in 1987-1988, approximately 226,000 temporary immigrants in Canada in 1990, 334,000 temporary immigrants in Switzerland in 1989, 149,000 temporary immigrants in the United Kingdom in 1990, and 413,000 in the United States in 1989. These service suppliers can be divided into the four following categories at least.

1. Business visitors

(a) Type of situation

20. A person needs to enter an importing country for a short-term visit of several days or weeks, at most several months, for the purpose of conducting business while retaining residence in his/her country of origin (the exporting country) and while continuing to be paid in the country of residence. The type of business conducted while "visiting" the importing country might include the negotiation of contracts, participation in a business meeting or a gathering of professional associates but also the conduct of a short-term business assignment. An assignment of this type might involve, for example, a lawyer sent by a foreign law firm to confer with a client in the importing country on legal matters applicable to the law of the country of the exporting firm; a team of software engineers dispatched by a software firm to debug and maintain a piece of software; a team of engineers and technicians sent by a repair maintenance firm to repair a piece of machinery on a client's site in the importing country; and so on.

(b) Type of restriction

21. A detailed examination of immigration regulations in a number of developed countries reveals that, while all countries allow for some types of business visit, most restrict them on the basis of two principal criteria: first, that only non-gainful employment is allowed (in other words the business visitor is not entitled to earn a wage or a salary from a source in the importing country); second, that only certain types of activities are allowed, usually business visits, contract negotiations or professional meetings.

2. Intra-company transferees

(a) Type of situation

22. An exporting service firm has a commercial presence in the importing country through which it conducts service assignments. This presence qualifies as a "petitioning organization" *vis-a-vis* the importing country's immigration authorities and, as such, is entitled to apply for the transfer of the firm's employees from one of its foreign operations to that located in the importing country. Employees are transferred to the importing country to work for the company's local commercial presence and with the intent of establishing temporary residence; they are paid in the importing country and stay for periods ranging from several months to several years.

(b) Type of restrictions

23. As in the case of business visitors, countries may apply certain conditions and qualifications to national treatment. The most onerous restrictions at present are those that restrict the market access of such personnel. Typically, most developed countries allow certain managerial and special knowledge personnel (also called essential personnel) relatively unrestricted access in terms of time (up to several years), but most of these countries forbid the market access of non-essential personnel, or permit it only under highly restrictive conditions. In cases where non-essential personnel is allowed in, typically very stringent conditions that may be highly discriminatory (by country of origin) are imposed to screen applicants using labour market tests (to prevent foreign employees from competing with domestic employees.)

3. Treaty salespeople and service providers

(a) Type of situation

24. Three major types of situation are covered under this heading. First, an exporting service firm has won a contract in an importing country, and chooses to carry out its assignment without establishing a formal commercial presence in that country. In order to assemble staff to carry out the project, it must therefore be able to petition for visas and/or work permits from its home base for persons of the home country as well as of other nationalities. Second, a salesperson (or trader) is hired on a retainer basis by several firms, none of which has a commercial presence in the importing country, to set up temporary residence in a potential importing market for the purpose of soliciting contracts. The trader must be able to petition for temporary residence on his/her own behalf. Third, an artist, architect, lawyer or sportsperson, or a news correspondent is contracted as a self-employed person by an organization to render his/her services. The person must be able to petition for temporary residence on his/her own behalf.

(b) Type of restriction

25. Market access restrictions for this broad class of temporary personnel are even more onerous than for intra-company transferees. Most countries severely restrict this type of entry, making some exceptions for high-level professionals (university-level teachers, scientists, licensed professionals) and sportspeople and other entertainment personnel (actors, musicians, etc).

4. Company trainees

(a) Type of situation

26. A company wants to transfer one of its employees to one of its facilities in an importing country for purposes of company-based training. The employee, once trained, will enhance the service export capacity of the firm because of the relevance of that training to future service export situations. Coverage of this type of situation is important for developing countries for a double set of reasons. Technology transfer in services occurs in an important way through training of staff, and firm expertise in services may demand that individuals employed by the firm be experts in certain disciplines in more than one country. For example, a accounting firm wanting to advise foreign clients is likely to need staff who are knowledgeable in the accounting regulations of both the exporting and importing countries.

(b) Type of restrictions

27. Many countries make provision for this type of temporary personnel movement, which could be bound in their Schedules of Commitments.

E. Access for service suppliers

28. The major impediment to the realization of the competitive potential of developing countries in labour-intensive services has been seen as the barriers to the temporary movement of persons that arise from immigration laws and regulations. For that reason, the draft General Trade in Services emerging from the Uruguay Round, which recognizes that the movement of "natural persons" to supply services in another country constitutes "trade" in services and the conditions of access for such persons is a legitimate subject for the negotiation of trade concessions, is a very significant step forward in assisting developing countries to increase their participation in world trade in services.

29. The Uruguay Round Agreement provides for the negotiation of specific commitments to be included in the "Schedule of Concessions" at a sectoral or subsectoral level in terms of market access and national treatment. These are defined as follows:

- the market access commitment extends the right to foreign service providers to enter the market of an importing country so as to offer their services under either one of the four modes of service supply: "limitations on the total number of natural persons that may be employed in a particular service sector, or that a service provider may employ, and who are necessary and directly related to the supply of a specific service in the form of numerical quotas or an economic needs test" are defined as one of the barriers

to market access.

- national treatment commitments grant foreign providers the right to offer their services on terms no less favourable than those accorded to like domestic services or domestic providers of like services.
- additional commitments can be negotiated, for example, with respect to the recognition of professional services.

30. As noted above, the temporary movement of personnel across national frontiers is both significant and increasing in volume as a result of the growing globalization of markets. The impetus for growth in temporary movements of personnel has not been limited to personnel associated with exporting service firms, or exporting labour-service firms, but also stems from manufacturing exporters and investors needing to staff foreign operations with their own personnel and to provide for the maintenance of goods exported. Many developed countries are facing shortages of skilled labour in such labour-intensive services as construction (Japan), primary and secondary education (United States, France, other European countries), health (United States, Japan, Western Europe), software and computer services (United States and Japan in particular). Labour-intensive services, in many developed countries, will be hard-pressed to keep costs under control in the years ahead. This suggests that developed and developing countries could have a mutual interest in arriving at a more efficient international division of labour in the service sector, which would provide developing countries with the possibility of increasing their share of world trade in services.

31. The effective negotiation of meaningful access conditions for natural persons, as well as the formulation of complementary national export strategies, would require a clear idea of the different motivations of such movements and the different regulatory mechanisms encountered in each case. At least four principal situations can be identified in which the temporary movement of service-providing personnel is directly implicated in service trade and is of importance to the developing countries. These include business visitors, intra-company transferees, treaty salespeople and service providers, and company trainees.[18]

F. Increasing export opportunities for developing countries through personnel movement

32. The Uruguay Round should result in important new growth opportunities for exports of labour services from developing countries, provided that: (a) the concessions negotiated within the framework of the General Agreement on Trade in Services provide meaningful access for natural persons in sectors of interest to developing countries, which in turn will, *inter alia*, reflect the ability of developing countries to formulate and effectively pursue requests to this effect, and (b) the developing countries give themselves the means necessary for the promotion of such exports to take advantage of market access opportunities through all modes of supply.

1. Specific concessions on access for labour services

33. The Annex to the draft General Agreement on Trade in Services sets the context in which specific commitments for the progressive liberalization of such movement can be negotiated. The significance of this Annex also lies in its innovative character in that the movement of persons across national frontiers is seen as a subject for reciprocal trade negotiations.[19] Some major developed countries have offered to bind, in GATS, certain as-

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18 Thierry Noyelle *et al.*, "Trade in labour services and temporary movement of personnel: Elements for a request on labour mobility by the developing countries to the Group of Negotiations on Services", report (mimeo.) to UNCTAD, December 1991.

19 The Canada/United States Free Trade Agreement was a forerunner in this respect. See Peter Burn, "Professional

pects of their immigration law, particularly those relating to the movement of certain categories of managerial, executive and technical personnel within corporate structures. Developing countries have been seeking concessions for specific categories of labour on a sectoral and subsectoral basis, covering such areas as labour-intensive ship-building, ship-repairs, crewing, aircraft repairs, maintenance, ground handling services and construction services.

(a) Professional licensing and entry barriers

34. A major obstacle to trade in licensed professional services, i.e. those services that are subject to certification by a licensing authority, is the lack or only limited recognition of professional licences obtained in one country by the licensing authorities of another country. Developing country professionals are unable to capitalize on their lower labour costs if they are excluded from markets owing to lack of recognition of their qualifications and consequent inability to obtain a licence to practice their profession. Article VII of the draft General Agreement on Trade in Services, contains provisions with respect to the licensing and certification of services providers, and forbids Parties to accord recognition in a manner that would constitute a means of discrimination among countries or a disguised restriction on trade in services. The provision for the negotiation of "additional commitments" can be used to obtain specific concessions in this area. Considerable technical background work would be required to derive effective benefit from these provisions, i.e. to identify where lack of recognition is motivated by protectionist considerations, as well as where action could be taken to meet legitimate standards. This is an issue that could be addressed by the licensing authorities of countries themselves through international working groups.[20]

35. For possible barriers of the entry of professional service practioners to foreign country, the following elements were identified. These include: (i) nationality, (ii) restrictions on where to reside, (iii) non-recognition of education obtained in home country, (iv) requirement for supervised internship with or without remuneration, (v) examination requirement, (vi) obligation to be a member of a professional association in importing country, (vii) ethic and standard requirement, and (viii) language. They are legitimate practice for quality control and consumer protection in professional services, but lack of internationally agreed standards and qualifications for such services allow countries to practice these obligations as protectionism and disciminatory measures.

(b) Anti-competitive practices

36. The GATS does not provide detailed or binding obligations to deal with restrictive business practices. Article IX merely recognizes the problem and provides for consultations and the exchange of information with a view to eliminating such practices. Many such RBPs could hamper the export of labour-intensive services, notably arrangements whereby branches or affiliates of transnational firms, particularly in the professional service sectors, follow policies that are exclusively concentrated on the domestic market of the developing country concerned, and do not envisage personnel travelling abroad to provide services even when the access conditions permit.[21]

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services and the Uruguay Round: Lessons from the Canada-United States Free Trade Agreement", in UNCTAD, Trade in Services: Sectoral Issues (UNCTAD/ITP/26), New York, 1989.

20 For example, in advance of a North American Free Trade Agreement, the Mexican association of civil engineers is now working with the engineering associations of several states of the United States and trying to link up with Canadian provincial associations.

21 See P. Brusick, M. Gibbs, M. Mashayekhi, "Anti-competitive practices in the services sector" in UNCTAD, Uruguay Round: Further Papers on Selected Issues (UNCTAD/ITP/42), New York, 1990, and Sieh Lee Mei Ling,

2. National policy measures

37. However, to benefit from existing or negotiated access for labour services, and to take advantage of other modes of supply, developing countries will have to formulate complementary policy measures at the national level. These may include the following.

(a) Promoting export-oriented labour service firms

38. As noted above, many developing countries already have a considerable experience of exporting labour services, in such areas as construction, engineering consultancy, management consultancy, security services, cleaning services, educational services and still other fields of business. There may also be specialized expertise related to the production of goods or natural resource extraction which could be "externalized" and organized in labour-intensive enterprises.[22] This expertise could be examined more closely both in terms of the past experience of individual firms in export markets - to assess strengths and weaknesses and the specific problems encountered in terms of market access, national treatment, restrictive business practices, and so on - and in terms of the effectiveness (or lack thereof) of the national policies put in place in the past to promote the growth of some of these firms. This would assist developing countries in organizing their exports of labour services within corporate structures of national enterprises with the expected benefits of (a) facilitating the penetration of export markets, (b) accumulating expertise in technology, (c) maximizing profits and foreign exchange income from the exporting country. A major study of successful experiences and possible new approaches within the context of the post-Uruguay Round framework would seem highly desirable.

39. In formulating policies with respect to the promotion of labour service firms and the development of export markets for them, countries that are traditional exporters of labour might review conventional labour export schemes as promoted through bilateral agreements, as well as the promotion that has taken place on an unorganized, haphazard basis. The existence of expatriate communities in foreign countries has often provided the initial stimulus to the export of a variety of services.

40. Also, under the Agreement, there are opportunities for firms with their headquarters in an importing country to bring service-providing personnel from an exporting country, provided that such personnel has established an initial contractual relationship with a subsidiary or affiliate located in the exporting country. This suggests that exporting countries might want to look into policies that would encourage service firms from the developed countries to invest in labour-intensive aspects of their production in the form of branches or joint ventures in their countries, that could serve as a base for the initial employment of service-providing personnel. Subsequently, such personnel might later be transferred to work on projects in the firm's facilities located in the developed countries, and even later be recruited by enterprises in developing countries.

(b) Promoting off-shore labour service exports

41. A number of developing countries have accumulated a certain amount of experience promoting off-shore labour service export schemes in areas such as data processing, software development or financial processing. Whether this has been supported through the opening of export processing zones, the introduction of tax holiday schemes, or yet other types of incentive, the effectiveness of these policies should be assessed for the benefit of

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"Professional business services in ASEAN and the Uruguay Round trade negotiations" in UNCTAD/ITP/51, vol. one, *op. cit.*, pp. 35-76.

22 See, for example, "Services in the developing countries", Trade and Development Report, 1988, *op.cit.*, section C.4. Tunisia, pp. 208-210.

other countries. Chapter II below emphasizes the critical linkage between such off-shore labour service exports and the telecommunication infrastructure, in other words between a country's off-shore export policy and its telecommunication policy.

42. Potentials for off-shore labour service exports are related to and often dependent upon expertise accumulated through the temporary movement of labour. For example, when labour-exporting countries have numbers of managers and professionals in banks, insurance firms, and other financial institutions based in other countries. Conceivably, some of this expertise could be repatriated to the home country, and used to start financial processing firms working as back-office operations for financial firms located in those countries where the experience had been obtained, and later elsewhere.

G. Regional integration agreements

43. For many countries, the greatest export opportunities for labour services may exist in the context of regional markets that already fall under regional integration arrangements. Regional and preferential arrangements among developing countries have dealt with trade in services, including the movement of labour, to differing degrees, some including rather liberal provisions in this respect.[23] In the light of the lessons that may have been gained from the GATS negotiations, it might be useful to review some of these arrangements and identify the extent to which services have been effectively incorporated, so as to provide guidance in the possible renegotiation or extension of the arrangements to cover services by drawing upon the experience of the Uruguay Round negotiations. In this context it should be noted that Article V of the draft General Agreement on Trade in Services provides for the preferential liberalization of services within economic integration agreements, providing there is substantial sectoral coverage, that no mode of supply is " a priori" excluded, and that national treatment is generally provided (developing countries enjoy a degree of flexibility with respect to these criteria).

44. The draft General Agreement on Trade in Services recognizes preferential trade agreement in the area of services. In order to make the existing regional economic integration agreements among developing countries benefit from this provision, there is a need for these countries to define sectors or sub-sectors in which preferences will be given among themselves in terms of market access and national treatment for all modes of supply. Such precision is particularly necessary in the areas of tourism, transportantion, professional services and financial services where regional integration can be practiced effectively.

CHAPTER II

23 For partial reviews, see, for example, Luis Abugattas, "Services as an element of cooperation and integration among developing countries: Implications for the Uruguay Round of Multilateral Trade Negotiations", in UNCTAD, Trade in Services: Sectoral Issues (UNCTAD/ITP/26), New York, 1989, pp. 431-475, or Noyelle and Redfield, "Internationally traded labour services in Africa....", *op. cit.*

EXPORT OF SERVICES THROUGH CROSS-BORDER INFORMATION FLOWS

45. There is growing interest in the possibilities of exporting labour-intensive services through the "cross-border" mode of supply, which does not involve the movement of persons to foreign countries with all the inherent difficulties entailed. One of the more traditional forms of such export has been the repair of ships, aircraft and other equipment that have become major exports of certain countries. In addition, "processing", including the assembly "maquiladora" industries, are a rapidly growing service export.[24] The ability of developing countries to export these services is obviously a function of access conditions for goods and will be addressed in a separate study. The following paragraphs concentrate on the export of the information content of services through telecommunications networks.

A. Information networks and telecommunications to facilitate trade in labour-intensive services

46. A country's ability to exploit information-based industries depends on computer and telecommunications capabilities, human resources and market strategies. Inadequate infrastructure, lack of trained personnel and restrictive regulatory policies are often identified as the prime handicaps for developing countries seeking to establish viable information-communications oriented service industries.

47. Data resources today have become a major component of many services owing to their *information-intensive* nature and need for electronic transmission to branches of organizations and to customers alike. Computer communications are designed to deliver *invisible products* for services entities as well as in manufacturing and agriculture. Information technology permeates most production, management, marketing and distribution functions of manufacturing as well as governments and public institutions such as universities and hospitals. Parallel achievements in *computing* in terms of size, power, price and capability, and *telecommunications* through higher transmission speeds, reliability, standardization, accessibility and cost, have heightened the importance of telecommunications and data services (TDS) to economic development in all parts of the world.

48. There is a clear linkage between the creation of adequate indigenous capabilities and the ability of developing countries to: (a) import and export many information-communications dependent services and (2) gain access to foreign information resources and technology. The interactive and transactional nature of TDS determines its character. This is the reason TDS has become so vital to the design, marketing and delivery of many different services produced by developed and developing countries. Many developing countries are also engaged in crossborder telecommunications and data services, as will be described in the following sections.

B. Developing country experiences with trade in telecommunications and data services (TDS)

49. Telecommunications and data services (TDS) encompass data processing, computer

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24 See B. González-Aréchiga, J.C. Ramirez, and F.A. Gómez, "Maquiladoras e intercambio de servicios", Mexico: una economía de servicios (UNCTAD/ITP/58), New York, 1991 (Spanish only as of this date).

software, databases and telecommunications services.[25] TDS may be commercially supplied to national and foreign customers or on a non-commercial basis between affiliated entities. It has been established that 80-90 per cent of TDS consists of intra-firm transactions.[26] The distinction between intra-firm and commercial TDS has become blurred, however, because a number of transnational corporations (TNCs) are setting up subsidiaries to sell telecommunications or data processing capacity and online database retrieval services.

50. The creation and growth of data conversion services in developing countries, particularly in the Caribbean, Latin America, East Asia and Eastern Europe have received considerable publicity in the 1980s. Offshore key-punching services have been operating in Barbados, Brazil, India, Mexico, the Philippines, the Republic of Korea and Taiwan (Province of China) for a number of years, and have constituted a market niche for developing countries, because of economic and technological advances. One of the first examples, which came about because of low labour costs and falling telecommunications tariffs, was the establishment by a United States airline of a Caribbean data services subsidiary in Barbados for the keypunching of millions of airticket coupons. When computerized, the coupon data are electronically transmitted to the airline headquarters in the United States.[27]

51. The typical situation has been for bulk hard copy (paper records) to be flown from their origin in developed countries to developing countries for data entry.[28] Large database firms in the United States, such as those requiring the input of thousands of pages of legal texts, have turned to developing country entrepreneurs for data entry services. From a financial perspective, labour costs are attractive and telecommunications tariffs have fallen, allowing for the electronic transmission of processed data to its owners. However, technology developments may render some data conversion opportunities obsolete in that optical scanning techniques now make it possible for computers to record directly large volumes of paper-based information. The growing necessity to return processed information to customers electronically also increases the costs and technical requirements for firms in developing countries. However, some developing countries have been able to raise the skill level of their export of such services, as witnessed by the recent decision of Swissair to relocate its accounting activities to Bombay.

52. The software services industry has become a large and rapidly expanding segment of TDS. Among the developing countries active in the world software industry are Brazil, India, Mexico, the Republic of Korea, Singapore and Taiwan (Province of China),[29] while others (including China, Hong Kong, Malaysia, the Philippines and Saudi Arabia) are building up software service export capabilities. There are four main software products: (a) *professional services* providing application and system software development, software maintenance, training and education; (b) *software packages* comprising standardized application software; (c) *processing services* for online data processing and networking services; and (d) *systems integration*, providing customized configurations of hardware and software to meet specific information technology software needs of end users. It has been estimated that this industry had a turnover of $128 billion in 1990 which will grow to $300 billion in 1995. The United States' market share is nearly 60 per cent, Europe has 28 per cent, Japan 9 per cent and developing countries 3 per cent.[30]

1. National software industry experiences

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25 Karl P. Sauvant, International Transactions in Services - The Policies of Transborder Data Flows (Westview Press, Boulder, Colorado, ISBN 0 8133-0310-9, 1986), pp. 1-18.

26 *Ibid.*

27 See "Issues arising from transborder data flows", Trade and Development Report, 1988, *op.cit.*, sect. D.3, p. 181.

28 The Philippines, the Republic of Korea and Taiwan (Province of China) have been actively involved in this activity.

29 Impact of Telecommunications and Data Services on Software Services, report by Tata Consultancy Services, New Delhi, February 1991, for Atwater Institute, Montreal, Canada (to be published by Atwater).

30 See Noyelle, "Computer software and computer services ...." (UNCTAD/ITP/51), *op. cit.*, pp. 77-106.

53. A brief description of the software industry in four countries will illustrate its composition, the involvement of government authorities and collaboration with foreign enterprises:[31]

India. In 1989-1990 the turnover was nearly $142 million, consisting of professional services (76 per cent), data processing 16 per cent) and software packages (8 per cent). The strength of the software industry is said to be its convergence of major software companies in India with the latest technology overseas, collaboration with multinational information technology firms, availability of a large pool of qualified and "trainable" human resources, proficiency in English, and a fairly conducive environment for growth provided by a liberalized government policy framework, availability and use of satellite links and other telecommunications services by the key operators and consequently, more cost-effective software development as compared to many other countries. TDS activities are largely governed by the Department of Telecommunication and other public sector organizations as well as the Department of Electronics and National Informatics Centre. The establishment of private technology parks has been undertaken in several cities. Further, several specialized data networks have been created for oil, coal, banking, steel and power.

Republic of Korea. There are about 400 companies engaged in the software services business, about 80 per cent producing combinations of hardware and software and offering key punching services. The remainder are exclusively engaged in software development. The industry is small and fragmented, with about 70 per cent of the firms employing fewer than 30 employees. The Korea Institute of Electronics Technology fixes targets for various high technology areas in the country, including software. Computerization in almost all sectors of the economy also creates a large demand for software in the domestic market. Software services provided by Korean industry include key punching and data processing services, often for Japanese firms, repackaging and the production of modified versions of imported software and software development. Some of the constraints of the Korean software industry are language barriers, limited technical manpower and difficulty in providing sufficient maintenance and support.

Singapore. Almost 2 per cent of the GNP is invested in the development of information technology. The Government is actively encouraging major computer companies from abroad to set up bases in Singapore. Research in software development has been promoted through the establishment of applied research centres. Incentives are provided to the software industry in the form of venture capital financing and incubator facilities. The number of software engineers in the country and hardware/software sales have increased many times over. Research and development activities have been pursued in several aspects of advanced technology.

Malaysia. The software industry should be seen in the perspective of Malaysia's electronics industry which has grown into a multi-billion dollar business, making the country the top exporter of integrated circuits in the world. The Malaysia Institute of Microelectronics Systems (MIMOS) develops, maintains and upgrades computer-aided design (CAD) software. MIMOS also promotes the use of compatible and portable application software in the public and private sectors. The Government has introduced tax incentives to encourage both local and foreign companies to set up software development operations in the country. A national computer network is being developed to provide data, video and voice communications.

Software, however, is a good example of how information flows and the movement of persons are mutually supportive, as in this industry it is necessary for experts to travel abroad in order to enter into direct contact with clients in assessing their needs for custom software. In the absence of this possibility, exporters would have to rely on sub-

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31 Sieh Lee Mei Ling, "Professional business services in ASEAN ...." (UNCTAD/ITP/51), *op.cit.*, pp. 44-50.

contracting, which is estimated to constitute a relatively minor percentage of the total market.[32]

2. Teleports and economic zones

54. The Jamaica Digiport International (JDI) was established in the Montego Bay free zone in 1988. This teleport, a three-way joint venture of Telecommunications of Jamaica (30 per cent), Cable and Wireless (35 per cent) and A T & T (35 per cent), maintains international telecommunications links with Canada, the United States and the United Kingdom via satellite services and some fibre optic cables. A variety of information processing firms, wholly Jamaican or joint ventures, have been set up in Digiport whose economic advantages arise from economies of scale, improved telecom connectivity and abundant information processing services. Although there have been some setbacks, such as damage to facilities from the 1988 hurricane, the Jamaican Government is reported to be optimistic that JDI will be a financial success.[33]

55. In India and China, a teleport project and special economic zones, respectively, will exploit data processing opportunities. The India Teleport project, a planned joint venture between the Indian Ministry of Science and Technology and Massachusetts Office of International Trade, is to establish a satellite link between Pune and Boston. One of the important aspects of this venture would be to facilitate existing and new software industries through dedicated international telecommunications facilities. Without this teleport processing firms must rely either on links provided by clients or on existing international facilities. Neither is reported to be cost-effective for small-scale entrants or for firms targeting multi-client markets. China's Special Economic Zones (SEZs), prticularly Xiamen and Shenzhen, enjoy labour cost advantages, trade ties and a common written language with potential client nations.[34]

3. Online database services

56. An important dimension of the TDS market is online database services. The importance of this market segment lies in the potential role of access to online databases in instantaneously providing information to developing countries. This is particularly important for perishable data, such as currency quotations and commodity prices.[35] Conversely, developing countries possess natural resource, economic and demographic information that is likely to be of interest to TNCs and other foreign organizations. The potential clearly exists for developing countries both to establish commercial online database services available to foreign clients and to expand the access and use of foreign database services. However, there is little evidence that developing countries have entered this market.

57. Developing countries, as new entrants, face very high barriers to entry to the online database market. Even where adequate domestic technical, organizational and human infrastructures exist, the barriers of high investment costs, the necessity of certain economies of scale, and competition from established producers still subsist. Furthermore, since most of these countries are not linked with international data networks, access to the

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32 See T. Noyelle, "Computer software and computer services ....", *op.cit.*

33 Sydney Gorham, "Developing countries enter data services market", (Pyramid Research, Cambridge, Mass., USA); Transnational data and communications report, March-April 1991, pp. 14-17.

34 *Ibid.*

35 United Nations Centre on Transnational Corporations, Transborder Data Flows: Access to the International Online Database Market, New York, 1983, pp. 31-33.

principal online database market becomes almost prohibitively expensive.[36] While certain aspects of these deficiencies have been reduced in some countries, such as training of more technical personnel, improvements in local infrastructure and links with international networks, other formidable problems have not been resolved. The same difficulties that hold back the creation of online database companies also beset the strengthening of information-communication dependent service sectors, which would be the natural clients of domestic TDS industries.

C. National legislation and trade policies relating to TDS

58. Every country has created a body of public law relating to the provision of telecommunications, intellectual property, internal commerce and foreign trade. Rapid advances in technology, particularly electronics, have made a considerable amount of legislation obsolete for the situation existing today. The introduction of computer communications has resulted in new offerings to enable users to process and deliver a variety of innovative services. Complementing the new mobility and interactivity of information and knowledge are new services created by traditional sectors such as accounting, aviation, banking, insurance, tourism and transportation.

59. Coincidentally with the trend toward liberalization and privatization of several service sectors, most countries are embarking upon a process of re-regulation so that their laws are relevant to current world commercial and trading norms. Consequently, the process of modernization of laws and regulations is often intertwined with policy choices involving the role of government in the supply or regulation of various services, including telecommunications.

60. The convergence of automated data processing with telecommunications has led to the "digital revolution", resulting in vast new capacity and capabilities.[36] The outcome has been a separation of basic telephone services (including facsimile) offered to residential customers from a range of enhanced computer-driven services utilized by commercial entities. Accompanying this dramatic explosion of telecommunications services offerings is the build-up of the role of users in terms of leasing public lines for private use for their construction of international networks, and greater freedom to choose terminal equipment. Another result has been the establishment of enterprises for the commercial exploitation of markets created by enhanced services possibilities.

61. Technological developments over the last 30 years have precipitated restructuring, indeed the reform of many national telecommunications regimes. Initially these have taken the form of (1) separation of posts and telecommunications administrations; (2) separation of regulatory responsibilities from operational functions; and (3) diversification of souces of telecommunications services. The diversification process in developed countries has resulted in a greater role for commercial users and creation of value-added service providers. An extensive litany of "access and use" rights is the subject of bilateral international value-added service (IVAN) agreements between Canada, Japan, Hong Kong, the Republic of Korea, and between the United Kingdom and the United States, respectively. The Uruguay Round draft General Agreement on Trade in Services contains an Annex on Telecommunications which elaborates upon the provisions of the Agreement with respect to measures affecting access to and use of public telecommunication transport networks and services for those services included in the Schedules of Concessions. It also recognizes that developing countries urgently require assistance in strengthening their telecommunications infrastructure and provides them with certain flexibility (e.g. the right to

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36 *Ibid.*

37 G. Russell Pipe, "Telecommunications services: Considerations for developing countries in Uruguay Round negotiations" (UNCTAD/ITP/26), *op.cit.*, pp. 49-110.

cross-subsidize) to reflect their special situation.

62. Quite separate forms of legislative and regulatory policy in telecommunications reforms in developed countries have been constituted by a range of *information law* initiatives. These are designed to bring traditional law and practice into the information services era. Included are: (a) ***intellectual property*** rights which are being redefined to accommodate electronic products and services; (b) ***protection of the rights of individuals***, viz. automatically processed personal details; (c) ***authentication of transactions*** as transfers of electronic funds become increasingly common in financial services; (d) ***verification of signatures*** in legal documents and court proceedings; and (e) ***standardization of customs documentation*** utilizing electronic data interchange techniques.

D. Promoting TDS growth in developing countries: Policy issues

63. The dual role of TDS as a separate service sector and as enabling other economic activities to take place, should be recognized in the design and implementation of developing country activities. It is necessary to create sufficient indigenous capabilities to support information-communication-intensive or dependent services, such as financial services and tourism, in order for commercial data and telecommunications entities to build viable domestic and international markets and to use the telecommunications "mode of supply" to export labour-intensive services.

64. A services industry policy promulgated at senior government levels with economic development and external trade as its objectives would seem to be a desirable and necessary point of departure for many developing countries. National services strategy would encompass all commercially traded services, including aviation, construction, financial insurance, and professional services, as well as information and telecommunications services. The size, scope, and technological requirements will largely determine the viability of TDS industries for many countries.

65. Since TDS industries can be expected to be the consequence of the development of other service sectors, government domestic strategy and commitments to a multilateral trade agreement (GATS) will influence the creation of particular TDS services. For example, if tourism is a priority, involving increases in civil aviation, domestic and international; the building of new hotels; the expansion of car rental facilities; special events; new restaurants, etc., a TDS offshoot might be computer services bureaux which handle the resulting data processing requirements. Should financial, insurance and accounting be given priority attention for expansion, the need for customized software is likely to grow rapidly, providing a niche for local suppliers who could gain a cost advantage.

66. Certain developing countries may choose to embark on programmes to develop a "dynamic market for information services". The European Community, for example, launched an internal information services market (IMPACT) programme in 1988 involving an action plan to set up this market by 1992; to stimulate and reinforce the competitive capability of European suppliers of information services; promote the use of advanced information services, and reinforce joint efforts to achieve Community cohesion with respect to information services policies.[38] The introductory IMPACT programme has been renewed for 1991-1995 (IMPACT 2) with a budget of $70 million to: (1) improve the understanding of the market; (2) overcome legal and administrative barriers; (3) increase the user-friendliness of services and improve information literacy; and (4) support strategic information initiatives.[39]

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[38] Proposal for a Council Decision setting up a Programme for an Information Services Market (COM(90) 570 final, Brussels, 23 January 1991), p. 4.

[39] Press Release, Commission of the European Communities, Brussels, 8 November 1991, 5 pages. The objectives of

E. Improvement of capabilities

67. Information and telecommunications technologies have rapidly advanced while at the same time they have become universal through their utilization by all types of organizations around the world. Unlike the products and processes of the industrial revolution, which were often slow to be introduced into developing areas, the same computer and communications equipment or techniques are often placed on the world market in a matter of weeks, instead of months or years. This can be advantageous to developing countries because deficiencies in technology can be overcome if financial resources are available to purchase and install state-of-the-art products and processes. On the other hand, TNCs expect, indeed require, TDS to conform to the technology and regulatory environments existing in many developed countries. "Local services on a worldwide basis" is a slogan used by some international telecommunications operators to emphasize "support for customer demands".

68. Many developing countries have been making a greater commitment to improve their infrastructures in recent years, but the pace is too slow to make a significant reduction in the gap between communications-rich and communications-poor countries.[40] The backbone of every national communications system is the telephone network. "About 50 countries have less than one main telephone per 100 population and more than 110 countries have less than 10 main telephones for 100 population".[41] For developing countries "the problem is structuring a set of institutional relations that will achieve two objectives. The first is to stimulate the process of telecommunications development in the direction of building the telecommunications infrastructure and extending it to the population. The second is to meet the rapidly growing and changing needs of the modern economic sector. Thus, policies that may be most appropriate for developed countries need not necessarily be the most appropriate for developing countries".[42]

69. The acute need for development of telecommunications infrastructure in Africa is emphasized in formulating development policy in the region. Part of the failure of the African economies to expand their trade in labour-intensive services is due to the lack of infrastructure, particularly of advanced telecommunications and information networks.

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this EC initiative are consistent with those of many developing countries:

> "The modern economy is voracious for information. From R & D and patents to computer-aided design, from manufacturing and marketing to customer feedback, it is an essential input for enterprises. Large sectors of the economy, such as banking and finance, trade, insurance, transport and tourism, are practically information machines.
>
> Each year more information is produced than the whole of writing from the dawn of history to the beginning of this century. And the rate is increasing.
>
> Despite the exponential growth, the European information market is fractured by legal and administrative barriers, linguistic diversity, a lack of standards and incomplete data on information and information flows themselves. For private and public enterprises and agencies to fully respond to the challenge of the Single Market of 1993, European information systems need to be at least on a par with national or regional information services, many of which have achieved a satisfactory level of development.
>
> The challenge of creating a European information market is complicated by the strong competitive growth of the information sector. Europe's main competitors have the advantage of large single home markets. Unless European service providers create their own strong information sector, they could see this basic resource dominated by overseas companies".

"The changing telecommunications environment", Report of the Advisory Group on Telecommunications Policy, ITU, Geneva, February 1989, pp. 22-25.

40 *Ibid.*

41 *Ibid.*

42 Restructuring of telecommunications in developing countries, ITU Centre for Telecommunications Development, Geneva, May 1991.

There is a need for further cooperation with African countries and developed countries to develop domestic supportive telecommunications infrastructures.

70. The following are the areas where sustained attention is necessary in the development of telecommunications and information infrastructures in African countries:

(1) Research and training in this area, which should be given priority to enable African countries to benefit from advanced information technology;
(2) Cooperation with international development agencies for the development of telecommunication infrastructures in Africa;
(3) Financial and technical assistance from the private sectors.

71. Regional economic cooperation and integration in Africa are essential for developing telecommunications and information-oriented service industries in order to benefit from economies of scale, to use scarce resources efficiently, and to reduce national overhead costs.

72. The major issues facing developing countries were identified by the ITU policy advisory group as the following:

(1) ***Human resource development***. Shortages of skills at all levels, technical, operational, managerial and planning, frustrate the performance of most aspects of telecommunications improvement and expansion. The creation of conditions to promote human resource development is the key to the resolution of most, if not all, of the other problems. Policies and institutional arrangements must be established that will permit human resources to be nurtured along the learning curve to the stage of maturity.
(2) ***Operational efficiency***. Limited human resource skills have held back the establishment of operationally efficient telecommunications entities. This includes failure to employ sound business practices, bureaucratic inertia and undue political intervention in day-to-day management, which has sometimes compromised efficiency and dampened the interest in outside suppliers of human and capital support.
(3) ***Attracting investment capital.*** If operational efficiency problems can be solved, it is likely that capital can be attracted to telecommunications system expansion under a wide variety of options. It is necessary for the operating entity, which could range from a specialized government operating entity to a fully privatized company, to be separated from the general administration of civil service functions. Another factor is foreign currency availability and the risk of changes in currency valuations in international currency markets.
(4) ***Multiple policy objectives***. National telecommunications policies must attempt to achieve multiple objectives, some economic, some social. Among the highest priority for telecommunications investment must be to build up the national infrastructure network. Competitive procurement and financing can lead to considerable cost savings. Supplemental services have a role in two areas: (1) subscriber terminal equipment, and (2) value-added services.

Table 1

CURRENT ACCOUNT REVENUES FROM LABOUR INCOME, MIGRANT TRANSFERS AND WORKERS' REMITTANCES IN SELECTED LABOUR-EXPORTING COUNTRIES, 1989

	In $ million	*As a percentage of GDP*
Bangladesh	758	3.9
Egypt	4,254	12.4
India	2,660	1.1
Korea, Rep. of	1,715	1.0
Lesotho	377	114.2
Mexico	972	0.6
Morocco	1,375	6.3
Pakistan	2,237	6.6
Philippines	475	1.2
Sri Lanka	356	5.6
Thailand	942	1.6
Tunisia	497	5.7

Source: International Monetary Fund, Balance of Payments Statistics, vol. 41, and Yearbook, Part 1, 1990; World Bank, World Development Report 1990.

Table 2

RECENT ESTIMATES OF ANNUAL FLOWS OF TEMPORARY IMMIGRANTS AND VISITORS INTO SELECTED DEVELOPED COUNTRIES

CANADA, 1990	
Temporary immigrants and visitors	***Not available***
Transit and tourists	Not available
Student authorizations	102,530
Business visitors	Not available
Employment authorizations	226,911
AUSTRALIA, 1987-1988	
Temporary immigrants and visitors	***2,034,390***
Overseas visitors (in transit and less than one year, business or pleasure)	1,990,500
Overseas visitors (more than one year; mostly business)	43,890
SWITZERLAND, 1989	
Temporary immigrants and visitors	***Not available***
Transit and tourists	Not available
Business visitors	Not available
Yearly permits	257,065
International civil servants	25,814
Seasonal workers	77,015
JAPAN, 1989	
Temporary immigrants and visitors	***1,600,000***
UNITED KINGDOM, 1990 [a]	
Temporary immigrants and visitors	***8,004,000***
Transit visas	800,000
Visitors for pleasure	5,500,000
Students	200,000
Visitors for business	1,300,000
Au pairs	8,000
Diplomats and dependents	18,000
Work permit holders and dependents	48,700
Other temporary working immigrants (writers, working holiday makers, etc.)	92,300
Wives/husbands/fiancés of UK citizens	18,500
UNITED STATES, 1989 [b]	
Temporary immigrants and visitors	***16,144,577***
Transit	293,364
Visitors for pleasure	12,114,584
Students and dependents	578,229
Business visitors	2,552,719
Foreign Government employees and others	162,963
Work permit holders and dependents	413,403

Source: Immigration statistics of individual countries.

a Exclusive of citizens from EC countries.

b Exclusive of Mexicans and Canadians entering the country overland.

Table 3

SOFTWARE SERVICES MARKET IN SELECTED DEVELOPING COUNTRIES, 1987

(Estimates in $ US million)

Rank	*Country*	*Value of market* [a]
1.	Brazil	2,186
2.	People's Republic of China	968
3.	Mexico	117
4.	Republic of Korea	107
5	Malaysia	67
6.	Singapore	71
7.	Hong Kong	61
8.	Taiwan (Province of China)	57
9.	Saudi Arabia	49
10.	India	38

Source: TATA Consultancy Services, New Delhi, February 1991.
a Domestic production less exports plus imports.